

### **Remarks**

Upon entry of the Amendment, Claims 1-23 and 26-30 are pending. Claims 24 and 25 have been canceled. Based upon the remarks below, it is respectfully submitted that the application is in condition of allowance.

#### **Claim Rejections- 35 USC §112**

Claims 1-30 have been rejected under 35 USC §112 , second paragraph for allegedly being indefinite for failing to distinctly claim the subject matter considered to be the invention. It is respectfully submitted that claims 1,2, 11, 17 and 19 have been amended to overcome this rejection. Claim 24 has been canceled. Accordingly, the Examiner is respectfully requested to reconsider and withdraw this rejection.

#### **Claim Rejections- 35 USC §102**

Claims 24, 25, 29 and 30 have been rejected under 35 USC § 102 (b) as anticipated by or , in the alternative, under 35 USC §103 (a) , obvious over Tokuyama et al US Patent No. 3,607,449 (“the ‘449 patent”). Claims 24 and 25 have been canceled. Claim 26 has been converted to independent form. Claims 29 and 30 have been amended to depend on claim 26. Accordingly, this rejection is obviated. The Examiner is respectfully requested to reconsider and withdraw this rejection.

Claims 24, 25, 27, 29 and 30 have been rejected under 35 USC § 102 (b) as anticipated by Schmitz et al “Ultrashallow Junction Formation by Outdiffusion from Implanted Oxide”, IEEE 1988 (“the IEEE article”). Claims 24 and 25 have been canceled. Claim 26 has been converted to independent form. Claims 27, 29 and 30 have been amended to depend on claim 26. Accordingly, this rejection is obviated. The Examiner is respectfully requested to reconsider and withdraw this rejection.

### **Claim Rejections- 35 USC §103**

Claim 26 has been rejected under 35 USC § 103 as being unpatentable over the '449 patent further in view of Lee US Patent No. 5,777, 337 ("the '377 patent"). The '449 patent has been discussed above. The '377 patent was cited for disclosing multiple dopant implants. However, the multiple dopant implants are of different dopant types. Indeed, the boron dopant is a P-type dopant and the arsenic is an n-type dopant to form a pn-junction. The claims recite multiple dopants of the same dopant type to optimize diffusion of the dopant into the substrate. Neither the '377 patent nor the '449 patent disclose or suggest a series of dopings of the same dopant type as recited in the claims at issue. For all of the above reasons, the Examiner is respectfully requested to reconsider and withdraw this rejection.

Claim 27 has been rejected under 35 USC § 103 as being unpatentable over the '449 patent further in view of Mannino , "Nuclear Instruments and Methods in Physics Research B186 (2002) , pages 246-255 ("the Mannino reference"). The '449 patent was discussed above. The Mannino reference was cited for disclosing doping boron clusters to form shallow junctions. The Mannino reference does not otherwise disclose or suggest a series of dopings of the same dopant type as recited in the claims at issue. For these reasons and the above reasons, the Examiner is respectfully requested to reconsider and withdraw this rejection.

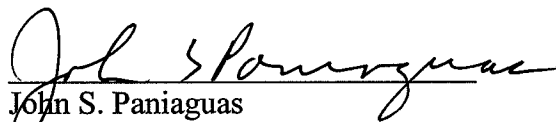
Claim 28 has been rejected under 35 USC § 103 as being unpatentable over the '449 patent and the '337 patent further in view of Marinskiy, Materials Research Society Symposium Proceedings, Vol. 669, (2001), page J2.5.1 to J2.5.6 ("the Marinskiy reference"). . The '449 and '337 patents were discussed above. The Marinskiy reference was cited for disclosing the passivation of boron by hydrogen. The Marinskiy reference does not otherwise disclose or suggest a series of dopings of the same dopant type as recited in the claims at issue. For these reasons and the above reasons, the Examiner is respectfully requested to reconsider and withdraw this rejection.

Claims 24, 25, 27, 29 and 30 have been rejected under 35 USC § 103 (a) as being unpatentable over the '449 patent in view of the IEEE article. Claims 24 and 25 have been

canceled. Claim 26 has been converted to independent form. Claims 29 and 30 have been amended to depend on claim 26. Accordingly, this rejection is obviated. The Examiner is respectfully requested to reconsider and withdraw this rejection.

Respectfully submitted,

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